

What is claimed is:

- 5 1. A method for generating embedded code from a model, comprising the steps of:
prompting a user to specify at least one code generation goal for the embedded
code; and
generating code in a compliable form for the specified code generation goal.
- 10 2. The method of claim 1, further comprising the step of modifying one or more
parameters of the graphical model to comply with the code generation goal in response to
the user specifying said at least one code generation goal.
3. The method of claim 1, further comprising the step of providing feedback to the
15 user regarding the compliance of the graphical model with a selected condition.
4. The method of claim 3, wherein the user selects the selected condition through a
user interface.
- 20 5. The method of claim 4, wherein the user interface displays a list of conditions to
be checked, and prompts the user to select one or more of the conditions.
6. The method of claim 3, wherein the step of providing feedback to the user
regarding the compliance of the graphical model with a selected condition comprises
25 displaying a hyperlink for linking the selected condition to an object of the graphical
model that does not comply with the selected condition.
7. The method of claim 3, further comprising the step of modifying an object of the
model that does not comply with the selected condition.
- 30 8. The method of claim 7, wherein the step of modifying comprises identifying the
object and prompting the user to manually modify a parameter of the object.

9. The method of claim 7, wherein the step of modifying comprises automatically modifying a parameter of the model to comply with the selected condition.

10. The method of claim 1, wherein the graphical model is a block diagram.

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11. The method of claim 1, wherein each code generation goal corresponds to a general code generation goal.

10 12. The method of claim 11, further comprising the step of prompting the user to specify at least one detailed code generation goal for each specified general code generation goal.

13. The method of claim 12, further comprising the step of configuring the graphical model to comply with each detailed code generation goal.

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14. A method of preparing a graphical model for embedded code generation, comprising the steps of

displaying a user interface for prompting a user to specify one or more code generation goals; and

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automatically changing parameters of the graphical model that are inconsistent with the code generation goals specified by the user.

15. The method of claim 14, further comprising the step of identifying a condition that does not comply with the code generation goals specified by the user.

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16. A method of preparing a model for embedded code generation, the method comprising the steps of:

displaying a graphical user interface through which a user can specify at least one code generation goal for the embedded code to be generated from the model; and

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in response to a user specifying a code generation goal, providing feedback to the user regarding compliance of the graphical model with said code generation goal.

17. The method of claim 16, further comprising the step of modifying one or more parameters of the graphical model to comply with the target characteristic in response to the user specifying said at least one target characteristic.

5 18. The method of claim 16, wherein the step of providing feedback comprises indicating to the user whether the graphical model complies with a selected condition.

19. The method of claim 18, wherein the user selects the selected condition through the user interface.

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20. The method of claim 19, wherein the user interface displays a list of conditions to be checked, and prompts the user to select one or more of the conditions.

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21. The method of claim 18, wherein the step of indicating to the user whether the graphical model complies with a selected condition comprises displaying a hyperlink for linking the selected condition to an object of the graphical model that does not comply with the selected condition.

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22. The method of claim 18, further comprising the step of modifying an object of the model that does not comply with the selected condition.

23. The method of claim 22, wherein the step of modifying comprises identifying the object and prompting the user to manually modify a parameter of the object.

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24. The method of claim 22, wherein the step of modifying comprises automatically modifying a parameter of the model to comply with the selected condition.

25. The method of claim 16, wherein the graphical model is a block diagram.

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26. The method of claim 16, further comprising the step of generating code that is compatible with said at least one target characteristic.

27. The method of claim 16, wherein each target characteristic corresponds to a general code generation goal.

28. The method of claim 27, further comprising the step of prompting the user to specify at least one detailed code generation goal for each specified general code generation goal.

29. The method of claim 28, further comprising the step of configuring the graphical model to comply with each detailed code generation goal.

30. In a graphical modeling environment, a medium holding computer-executable instructions for a method, comprising the steps of:

displaying a graphical user interface through which a user can specify at least one target characteristic for code to be generated from the graphical model; and

in response to a user specifying a target characteristic, providing feedback to the user regarding compliance of the graphical model with said target characteristic.

31. In a graphical modeling environment, a medium holding computer-executable instructions for a method, comprising the steps of:

displaying a user interface for prompting a user to specify one or more code generation goals; and

automatically changing parameters of the graphical model that are inconsistent with the code generation goals specified by the user.

32. In a graphical modeling environment, a medium holding computer-executable instructions for a method, comprising the steps of:

prompting a user to specify at least one code generation goal for the embedded code; and

generating code in a compliant form for the specified code generation goal.

33. An apparatus comprising:
at least one processor;

a memory coupled to the at least one processor; and

a computer program residing in the memory and being executed by the at least one processor, wherein the computer program includes a wizard for guiding a user through a process for preparing a graphical model for a code generation process for creating code
5 based on the graphical model.

34. The apparatus of claim 33, wherein the wizard prompts the user to specify at least one code generation goal for the embedded code.

10 35. The apparatus of claim 34, wherein the wizard configures the graphical model based on code generation goals specified by the user.

36. The apparatus of claim 34, wherein the computer program generates code in compliance with the code generation goals specified by the user.

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37. The apparatus of claim 34, wherein the wizard prompts the user to select one or more conditions to be checked in the model.

38. The apparatus of claim 37, wherein the wizard identifies objects in the model that
20 do not comply with the selected conditions.

39. The apparatus of claim 37, wherein the wizard modifies objects in the model that do not comply with the selected conditions.